

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**LISTED GOVERNMENT LINKED COMPANIES (GLCs) IN
MALAYSIA: AN EVALUATION THROUGH FINANCIAL
RATIOS, CASH FLOW AND MACROECONOMIC FACTORS**

JAMALTUL NIZAM BIN SHAMSUDDIN



UUM
Universiti Utara Malaysia

**MASTER IN ISLAMIC FINANCE AND BANKING
UNIVERSITI UTARA MALAYSIA**

August 2019

**LISTED GOVERNMENT LINKED COMPANIES (GLCs) IN MALAYSIA: AN
EVALUATION THROUGH FINANCIAL RATIOS, CASH FLOW AND
MACROECONOMIC FACTORS**

By

JAMALTUL NIZAM BIN SHAMSUDDIN



**Research Paper Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
In Partial Fulfillment of the Requirement for the
Master in Islamic Finance and Banking**



Pusat Pengajian Perniagaan Islam
ISLAMIC BUSINESS SCHOOL
كلية إدارة الأعمال الإسلامية
Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PENYELIDIKAN
(Certification of Research Paper)

Saya, mengaku bertandatangan, memperakukan bahawa
(I, the undersigned, certified that)

JAMALTUL NIZAM BIN SHAMSUDIN (823639)

Calon untuk Ijazah Sarjana
(Candidate for the degree of)

MASTER IN ISLAMIC FINANCE AND BANKING (MIFB)

telah mengemukakan kertas penyelidikan yang bertajuk
(has presented his/her research paper of the following title)

Listed government linked companies (GLCs) in Malaysia: An evaluation through financial ratios, cash flow and macroeconomic factors.

Seperti yang tercatat di muka surat tajuk dan kulit kertas penyelidikan
(as it appears on the title page and front cover of the research paper)

Bahawa kertas penyelidikan tersebut ~~boleh diterima~~ dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.
(that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the research paper).

Nama Penyelia
(Name of Supervisor)

DR. MOHAMAD YAZID BIN ISA

Tandatangan
(Signature)

Tarikh
(Date)

15OGOS 2019

PERMISSION TO USE

In presenting this project paper in partial fulfillment of the requirements for a Post Graduate degree from Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this project paper in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor(s) or in their absence, by the Dean of Othman Yeop Abdullah Graduate School of Business where I did my project paper. It is understood that any copying or publication or use of this project paper parts of it for financial gain should not be allowed without my written permission. It is also understood that due recognition shall be given to me and to UUM in any scholarly use which may be made of any material in my project paper.

Request for permission to copy or to make other use of materials in this project paper in whole or in part should be addressed to:

Dean of Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman



UUM
Universiti Utara Malaysia

ABSTRACT

This research is to identify the performance of listed Government Linked-Companies (GLCs) using the financial ratios, cash flow from operating and macroeconomic factors. 11 years of performance was studied from 2007 to 2017. Data were extracted from the annual reports of company and included information from the income statement, balance sheet, cash flow statement and notes to the accounts published in Bursa Malaysia websites. The study covered 44 Government Linked Companies consist of 11 non-*Shariah* and 33 *Shariah* compliant that listed in Kuala Lumpur Stock Exchange. STATA 15 software was used in order to analyze the data by using diagnostic test, panel data test and hierarchal panel regression test. Panel regression tests have been used to determine the relationship of the variables. The findings of the study show there is a significant impact in the results through the different performance result of Government Linked-Companies when using financial ratios and cash flow from operating and macroeconomic factors. The study also found that cash flow from operating influence the profitability for all GLCs and non-*Shariah* of listed Government Linked-Companies in Malaysia with other internal and external variables. Besides, providing suggestions for further research work, this study provides several recommendations for researcher to obtain more comprehensive analysis of the profitability of GLCs.

Keywords: financial performance, government linked company, cash flow, financial ratios, profitability

ABSTRAK

Kajian ini adalah untuk mengenal pasti prestasi Syarikat Berkaitan Kerajaan (GLCs) dengan menggunakan nisbah kewangan, aliran tunai daripada operasi dan factor-faktor makroekonomi. Prestasi syarikat untuk 11 tahun dikaji bermula dari tahun 2007 sehingga 2017. Data diambil daripada laporan tahunan syarikat iaitu penyata pendapatan, lembaran imbangan, penyata aliran tunai dan nota kepada akaun yang diperolehi di dalam laman sesawang Bursa Malaysia. Kajian ini meliputi 44 Syarikat Berkaitan Kerajaan yang terdiri daripada 11 syarikat yang tidak patuh *Shariah* dan 33 syarikat patuh *Shariah* yang disenaraikan di Bursa Saham Kuala Lumpur (BSKL). Perisian STATA 15 telah digunakan untuk menganalisis data dengan menggunakan ujian diagnostik, ujian panel data dan *hierarchal* ujian regresi panel. Ujian regresi panel telah digunakan untuk menentukan hubungan antara pembolehubah. Dapatan kajian menunjukkan terdapat kesan yang ketara dalam keputusan melalui hasil prestasi yang berbeza bagi Syarikat Berkaitan Kerajaan apabila keputusan menggunakan aliran tunai daripada operasi dan factor-faktor makroekonomi digabungkan. Kajian ini juga mendapati bahawa aliran tunai daripada operasi mempengaruhi keuntungan untuk keseluruhan Syarikat Berkaitan Kerajaan dan Syarikat Berkaitan Kerajaan patuh *Shariah* dengan pembolehubah dalaman dan luaran yang lain. Selain daripada menyediakan cadangan untuk penyelidikan yang akan datang, kajian ini memberikan beberapa cadangan kepada penyelidik untuk mendapatkan analisis yang lebih menyeluruh berkaitan keuntungan Syarikat Berkaitan Kerajaan.

Kata kunci: prestasi kewangan, syarikat berkaitan kerajaan, aliran tunai, nisbah kewangan, keuntungan

ACKNOWLEDGMENT

In the name of Allah, the Most Gracious and Most Merciful. All my praises and gratitude to Allah, which has provided me strength, capability and ideas to accomplish this research. I would like to extend my appreciation to my supervisors, Dr Mohamad Yazid bin Isa for his thorough supervision, encouragement and willingness to support and guide me throughout completing this research. I would also like to express my gratitude for his enthusiasm. Without his guidance I will not be able to complete this project paper successfully. My sincere gratitude also goes to Prof. Madya Dr. Zaemah binti Zainuddin who helping me in the early stage of this research.

Not forgetting to my parents, Shamsuddin bin Arthan and Kamisah binti Mohd Nor for continuous *doa* and moral support in completing this research. To my wife, Noor Ismawati binti Esa, for understanding me and giving support and for your endless love and guidance without whom I would not be what I am today. Warmest love to my dearest children, Zieurr Ismal Naufal and Xaviera Hai fa Ismal for their patients and love. I do this to motivate you and I love and care you so much.

Special thanks to my colleague, course mate and all those who have assisted me in this study directly or indirectly. Your support and ideas are much appreciated. May Allah guide and protect you in all your endeavors. Thank you.

TABLE OF CONTENTS

	PAGE
<i>Certification of Research Paper</i>	ii
<i>Permission to Use</i>	iii
<i>Abstract</i>	iv
<i>Abstrak</i>	v
<i>Acknowledgment</i>	vi
<i>Table of Contents</i>	vii
<i>List of Tables</i>	xiii
<i>List of Figures</i>	xv
<i>List of Abbreviation</i>	xvi
CHAPTER I: INTRODUCTION	
1.0 Introduction	1 – 3
1.1 Background of Study	3 – 8
1.2 Problem Statement	9 – 13
1.3 Research Questions	13
1.4 Research Objectives	13
1.5 Definition of Key Terms	14 – 16
1.6 Organization of the Study	16 – 17
1.7 Conclusion	17

CHAPTER 2: LITERATURE REVIEW

2.0	Introduction	18
2.1	Review of Related Literature	
2.1.1	Cash Flow	18 – 21
2.1.2	Government Linked Companies as Investment Centre	21 – 23
2.1.3	Performance of Listed Government Linked Companies	23 – 24
2.1.4	<i>Shariah</i> Compliance	24 – 26
2.2	Underlying Theory	27
2.2.1	Return on Assets (ROA)	27 – 28
2.2.2	Return on Equity (ROE)	28
2.2.3	Profitability = cash flow	28 – 29
2.2.4	Profitability = Firm Characteristics	30 – 31
2.2.5	Profitability = Cash flow + Firm Size + Leverage	31 – 34
2.2.6	Profitability = Firm characteristic + Macroeconomics	34 – 36
2.3	Research Framework	36 – 38
2.4	Hypotheses Development	38 – 40
2.5	Conclusion	40

CHAPTER 3: RESEARCH METHODOLOGY

3.0	Introduction	41
3.1	Research Design	41 – 42
3.2	Method	42 – 43
3.3	The Sampling Technique	43 – 44
3.4	Data Collection Procedures	44

3.5	Statistical Methods	44
3.5.1	Diagnostic Tests	44
3.5.1.1	Multicollinearity Check	45
3.5.1.2	Heteroscedasticity Test	46
3.5.1.3	Auto-correlation Test	47
3.5.2	Panel Data Test	47
3.5.2.1	Fixed Effect Model	47–48
3.5.2.2	Random Effect Model	48
3.6	Research Framework	49–50
3.7	Conceptual Framework	
3.7.1	Hypothesis Development	50–52
3.7.2	Regression Model	53
3.7.2.1	Panel Regression Model	53–54
3.8	Conclusion	54

CHAPTER 4: RESULTS AND DISCUSSION

4.0	Introduction	55
4.1	Profitability Trend of GLCs in Malaysia	55–56
4.2	Descriptive Statistics of Variables for All GLCs in Malaysia	
4.2.1	All GLCs in Malaysia	56–58
4.2.2	Multicollinearity Test	59–60
4.2.3	Diagnostic Test	60
4.2.4	Heteroscedasticity Test	60–61
4.2.5	Auto-correlation Test	61
4.2.6	Hausman Test	61

4.2.7	Panel Regression Analysis for All GLCs in Malaysian	62–64
4.2.8	Internal and External Variables for All GLCs in Malaysia	
4.2.8.1	Cash Flow from Operating to Total Asset (CFFO)	64
4.2.8.2	Natural Log Total Asset (TA)	64–65
4.2.8.3	Total Debt to Total Asset (TD)	65
4.2.8.4	Base Lending Rate (BLR)	65
4.2.8.5	Inflation (INF)	65–66
4.2.8.6	Exchange Rate (EXC)	66
4.3	Descriptive Statistics of Variables for non- <i>Shariah</i> GLCs in Malaysia	
4.3.1	Non- <i>Shariah</i> GLCs in Malaysia	66–68
4.3.2	Multicollinearity Test	78–70
4.3.3	Diagnostic Test	70
4.3.4	Heteroscedasticity Test	70
4.3.5	Auto-correlation Test	71
4.3.6	Hausman Test	71
4.3.7	Panel Regression Analysis for Malaysian non- <i>Shariah</i> GLCs	72–74
4.3.8	Internal and External Variables for non- <i>Shariah</i> GLCs in Malaysia	
4.3.8.1	Natural Log Total Asset (TA)	74
4.3.8.2	Total Debt to Total Asset (TD)	74–75
4.3.8.3	Base Lending Rate (BLR)	75
4.3.8.4	Exchange Rate (EXCHANGE)	75
4.4	Descriptive Statistics of Variables for <i>Shariah</i> GLCs in Malaysia	
4.4.1	<i>Shariah</i> GLCs in Malaysia	76–78
4.4.2	Multicollinearity Test	78–79
4.4.3	Diagnostic Test	80

4.4.4	Heteroscedasticity Test	80
4.4.5	Auto-correlation Test	80
4.4.6	Hausman Test	81
4.4.7	Panel Regression Analysis for Malaysian <i>Shariah</i> GLCs	81 – 83
4.4.8	Internal and External Variables for <i>Shariah</i> GLCs in Malaysia	
4.4.8.1	Cash Flow from Operating to Total Asset (CFFO)	83
4.4.8.2	Natural Log Total Asset (TA)	84
4.4.8.3	Total Debt to Total Asset (TD)	84
4.4.8.4	Base Lending Rate (BLR)	84
4.4.8.5	Inflation (INF)	85
4.5	Discussion on the Results on the Comparative Analysis between All GLCs, non- <i>Shariah</i> GLCs and <i>Shariah</i> GLCs in Malaysia	85 – 90

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.0	Introduction	91
5.1	Summary of the Results	
5.1.1	Objective One	92
5.1.2	Objective Two	92 – 94
5.1.3	Objective Three	94 – 96
5.2	Contribution of the Study	96 – 97
5.3	Limitation of the Study	97
5.4	Suggestion for Future Research	97 – 98
5.5	Conclusion	98 – 99

REFERENCES

APPENDIX A

APPENDIX B



LIST OF TABLES

Table 1.1	Net Cash Rich Companies	10
Table 1.2	Cash Rich Companies	11
Table 3.1	List of Companies	43
Table 4.2.1	Descriptive Statistic of Variables for All GLCs in Malaysia	57
Table 4.2.2	Multicollinearity Diagnostic Test for All GLCs in Malaysia	59
Table 4.2.3	Correlation Matrix for All GLCs in Malaysia	60
Table 4.2.4	Diagnostic Test for All GLCs in Malaysia	60
Table 4.2.5	ROA and ROE Hausman test for All GLCs in Malaysia	61
Table 4.2.6	ROA and ROE Random Effect Robust result for All GLCs in Malaysia	63
Table 4.3.1	Descriptive Statistic of Variables for non- <i>Shariah</i> GLCs in Malaysia	67
Table 4.3.2	Multicollinearity Diagnostic Test for non- <i>Shariah</i> GLCs in Malaysia	69
Table 4.3.3	Correlation Matrix for non- <i>Shariah</i> GLCs in Malaysia	70
Table 4.3.4	Diagnostic Test for non- <i>Shariah</i> GLCs in Malaysia	70
Table 4.3.5	ROA and ROE Hausman test for non- <i>Shariah</i> GLCs In Malaysia	71
Table 4.3.6	ROA and ROE Random Effect Robust result for non- <i>Shariah</i> GLCs in Malaysia	73
Table 4.4.1	Descriptive Statistic of Variables for <i>Shariah</i> GLCs in Malaysia	76
Table 4.4.2	Multicollinearity Diagnostic Test for <i>Shariah</i> GLCs in Malaysia	79
Table 4.4.3	Correlation Matrix for <i>Shariah</i> GLCs in Malaysia	79
Table 4.4.4	Diagnostic Test for <i>Shariah</i> GLCs in Malaysia	80
Table 4.4.5	ROA and ROE Hausman test for <i>Shariah</i> GLCs in Malaysia	81

Table 4.4.6	ROA and ROE Random Effect Robust result for <i>Shariah</i> GLCs In Malaysia	82
Table 4.5.1	Summarize Result of ROA and internal and external factors of All GLCs, non- <i>Shariah</i> GLCs and <i>Shariah</i> GLCs in Malaysia	85
Table 4.5.2	Summarize Result of ROE and internal and external factors of All GLCs, non- <i>Shariah</i> GLCs and <i>Shariah</i> GLCs in Malaysia.	87
Table 4.5.3	Summary of Results Based on Hypotheses	90



LIST OF FIGURES

Figure 3.1	Conceptual Framework of the Study	49
Figure 4.1	Average Profitability Trend for GLCs in Malaysia	55



LIST OF ABBREVIATIONS

BLR	:	Base Lending Rate
CFFO	:	Cash Flow from Operating to Total Asset
EXC	:	Exchange Rate
GLCs	:	Government Linked Companies
INF	:	Inflation Rate
ROA	:	Return on Assets
ROE	:	Return on Equity
TA	:	Natural Log Total Assets
TD	:	Total Debts to Total Assets



CHAPTER 1

INTRODUCTION

1.0 Introduction

GLCs, or Government Linked Companies are companies which are controlled by the government either directly through majority shareholdings or indirectly with minority interest. It all started in 1971 with the New Economic Policy (NEP) which targeted to eliminate poverty and create a more harmonious country by restructuring the Malaysian economics. One of the key benchmarks was to raise “*Bumiputera*” share of the economy from 2.4% to 30% (Rogayah, 2014). Under the NEP, and its successor the National Development Policy, contracts corporations and concessions were dished out to Malay businessmen, who then grew their businesses rather successfully. In Asian Financial crisis 1997, the companies collapsed and government stepped in and the subsequent bailout meant many of those privately-held components become GLCs.

In Malaysia, the preparation of financial reporting in line with Malaysian Financial Reporting Standards (“MFRSs”) and International Financial Reporting Standards (IFRSs”). In Malaysia, the Malaysian Accounting Standards Board (MASB) is encouraging the disclosure of voluntary data in the annual reports. MASB 1 (Financial Statements Presentation) encourages the inclusion in the annual reports of financial review and additional information.

Non-obligatory accounting ratios are one of the important voluntary items revealed in an annual report. For many reasons, accounting ratios are commonly used. They

REFERENCES

- Adidu, F.A. and Olanye, P.A. (2006). *Basic Small Business Entrepreneurship: A Modern Approach*, Royal Pace Publisher, Agbor.
- Adelegan, O.J. (2003). *An Empirical Analysis of the relationship between cash flow and Divided charges in Nigeria*. *Journal of Research in Development and Management* Vol 15.PP 35-49
- Afza, T., Nazir, M.S. (2008). Working capital approaches and firm's returns. *Pakistan Journal of Commerce and Social Sciences*, 1(1), 25-36.
- Ang, R. (2001). *Buku Pintar Pasar Modal Indonesia*. Media Soft Indonesia.
- Ahamdzadeh, Y., Faal, F. and Gheshlaghi, F. D.R. (2014). *The cash flow statement's component effect on Management Performance in firms enlisted in Tehran Stock Exchange*, *Journal of Management and Accounting Studies UCT. J.Educa.Manag.Account.Stud., (UJMAS)*, pp 14-21
- Akhavain, J.D., Berger, A.N. and Humphrey, D.B. (1997). "The effects of megamergers on efficiency and prices: evidence from a bank profit function", *Review of Industrial Organization*, Vol. 12 No. 1, pp. 95-139.
- Ali M, Alireza, A and Jalal, .A. (2013). *The association between various Earnings and cashflow measures of firm performance and stock returns: some Iranian evidence*. *International journal of accounting and financial reporting*. Vol. 3. No 1. PP 24 – 39.
- Amah, K. O., Michael, C. E. & Ihendinihu, J. U. (2016). Relationship of cash flow and financial performance of listed Banks in Nigeria. *European Journal of Accounting, Auditing and Finance Research*.Vol 4(4), 89–97
- Ashtiani, A.R. (2005). *The study of relationship between accounting ratios and operating cash flows, investments financing and stock returns in TSE. Mashhad*, Islamic Azad University of Mashhad, Iran.
- Aziz, Abdul & H. Lawson, Gerald. (1989). Cash Flow Reporting and Financial Distress Models: Testing of Hypotheses. *Financial Management - FINANCE MANAGE*. 18. doi:10.2307/3665698.
- Baltagi, B., & Liu, L. (2014). *Random Effects, Fixed Effects and Hausman's Test for the Generalized Mixed Regressive Spatial Autoregressive Panel Data Model*. *Econometric Reviews*.
- Baltagi, B., Egger, P., Pfaffermayr, M., 2013. *A generalized spatial panel data model with random effects*. *Econometric Reviews* 32, 650–685.

- Beaver, W. H. (1966) *Financial ratios as predictors of failure*. Journal of Accounting Research, 71-111,
- Beaver, W. H., McNichols, M. F. & Rhee, J. W. (2005) "Have financial statements become less informative? Evidence from the ability of financial ratios to predict bankruptcy", Review of Accounting Studies, vol. 10: 93-122
- Bingilar P. F. and Oyadonghan K. J., (2014). "The Effect of Market Share on a Firm's Profit Ability: A Study of Selected Commercial Banks in Nigeria," *International Journal of Empirical Finance, Research Academy of Social Sciences*, vol. 3(1), pages 9-17.
- Blum, M. , (1974) 'Failing Company Discriminant Analysis', *Journal of Accounting Research, Spring*, 1-25
- Booth, L., Aivazian, V., Demircug-Kunt, A. and Maksimovic, V. (2001), "Capital structures in developing countries", *The Journal of Finance*, Vol. 56 No. 1, pp. 87-130.
- Broadstock, D.C., Shu, Y. and Xu, B. (2011), "The heterogeneous impact of macroeconomic conditions on firms' earnings forecast", Proceedings of Macao International Symposium on Accounting and Finance, Macao.
- Burja V. (2010), *The analysis of the financial statements of companies*, Aeternitas Publishing, Alba Iulia
- Carlos Correia, David Flynn and Michael Wormald (2007). *Financial Management*, pp 5-17.
- Casey, C.J. and Bartczak, N.J. (1984) 'Cash Flow - It's Not The Bottom Line', *Harvard Business Review*, 61-66,
- Casey, C. and Bartczak, N. (1985) 'Using Operating Cash Flow Data to Predict Financial Distress: Some Extensions', *Journal of Accounting Research*, Vol. 23, No. 1, 384-401
- Chen, K., B. Church. (1996). Going Concern Opinions and the Market's Reaction to Bankruptcy Filings, *Accounting Review*, Fanny, M. dan Saputra, S. 2005. "Opini Audit Going concern: Kajian Berdasarkan Model Prediksi Kebangkrutan, Pertumbuhan Perusahaan, dan Reputasi Kantor Akuntan Publik (Studi pada Emiten Bursa Efek Jakarta)". page 117-128.
- Chikashi, T O. (2013). An Investigation of comprehensive income and firm performance: The case of the electric appliances Industry of the Tokyo Stock Exchange. *Journal of Accounting and finance research*. Vol 2. No2. PP 29-35.
- Chinedu Francis Egbunike, Chinedu Uchenna Okerekeoti, (2018) "Macroeconomic factors, firm characteristics and financial performance: A study of selected quoted manufacturing firms in Nigeria", *Asian Journal of Accounting Research*, Vol.2 Issues: 2, pp. 142-168, <http://doi.org/10.1108/AJAR-09-2018-0029>

- Everingham, M. R. (2003). Wearable Mobility Aid for Low Vision Using Scene Classification in a Markov Random Field Model Framework, *International Journal Of Human-Computer Interaction*, 15(2), 231-244.
- Daoud, J. (2017). Multicollinearity and Regression Analysis. *Journal of Physics: Conf. Series* 949, 1-6.
- Deakin, E.B. (1972) 'A Discriminant Analysis of Predictors of Business Failure', *Journal of Accounting Research*, 167-179
- Deegan, P. (2005). The Importance Of Personal Medicine: A Qualitative Study of Resilience in People with Psychiatric Disabilities, *Scandinavian journal of public health*. Supplement 66 (66), pp. 29-35
- Deloof, M. (2003). "Does working capital management affect profitability of Belgian firms?" *Journal of Business Finance and Accounting*, vol. 30, no. 3-4, pp. 573-587.
- Douglas, J.E. (2014), "Bank liquidity requirements", The Brookings Institution, pp. 1-30.
- Dumbolena, I. and S. Khoury. (1980) Ratio stability and corporate failure. *The Journal of Finance*, Vol 35, No 4, 1017-1026
- Frank, B. P. & James, O. K. (2014). *Cash flow and corporate performance: A study of selected Food and Beverages Companies in Nigeria*. *European Journal of Accounting, Auditing and Finance Research*, Vol.2(7), 77-87
- Gado, N.D. (2015), "The impact of the Nigerian business environment on company performance: a case of 20 most capitalized companies in Nigeria", *International Journal of Business and Management Review*, Vol.3No.4, pp.36-48.
- Ghanbari, M., Haidari, F., Nazarzadeh, S. & Abasi, B. (2015) *The Relationship between Cash Flow and Financial Performance of Accepted Companies in the Tehran Stock Exchange*, MAGNT Research Report (ISSN. 1444-8939) Vol.3 (2), 1829-1841
- Gentry, J.A., Newbold, P. and Whitford, D.T., (1985a) "Classifying Bankrupt Firms with Funds Flow Components" *Journal of Accounting Research*, Spring, pp. 146-60
- Gentry, J.A., Newbold, P. and Whitford, D.T., (1985b) "Predicting Bankruptcy: If Cash Flow's Not the Bottom Line, What is?" *Financial Analysts Journal*, September, pp. 47-56
- Guda, D. O. (2013). The Relationship between Cash Flow and Profitability of Small and Medium Enterprises in Nairobi Country. *A Research Project Submitted for the Award of Degree of Masters of Business Administration*, University of Nairobi.
- Gujarati, D., & Porter, D. (2010). *Essentials of Econometrics 4th Edition*. Mc Graw-Hill.

- Grant, Jeremy. (2012) IHH extends Malaysia's big-ticket IPO run. *Financial Times Online*, 3 July
- Hadith No: 183, Chapter 1, Faith (*Kitab Al-Iman*), page 19. Retrieved from <https://ahadith.co.uk/chapter.php?page=19&cid=6&rows=10>
- Halimahton Borhan, Rozita Naina Mohamed, Nurnafisah Azmi, (2014) "*The impact of financial ratios on the financial performance of a chemical company: The case of LyondellBasell Industries*", World Journal of Entrepreneurship, Management and Sustainable Development, Vol. 10 Issue: 2, pp.154-160
- Hayat, R., (2006). *An Empirical Assessment of Islamic Equity Fund Returns*. Failaka
Retrieved from : <http://www.kantakji.com/fiqh/Files/Markets/70093.pdf>.
- Howard and Upton (1953). *Introduction to Business Finance*, McGraw Hill, New York.
- Irawan (2011). *Pengaruh Rasio Keuangan Terhadap Pertumbuhan Laba Pada Perusahaan Asuransi yang terdaftar di Bursa Efek Indonesia selama tahun 2007-2*
- Islamic Financial Service Board (2018). *Islamic Financial Service Industry Stability Report 2018*, Kuala Lumpur.
- Jacobs, Jennifer. 2011. GLCs versus Private Developers? *The Edge*, 29 March. <http://www.theedgemaalaysia.com/highlights/193504-glcs-vs-private-developers.html>
- Jayant, Thiam.2013. Are Government-Linked Corporations crowding Out Private Investment in Malaysia? *Research Gate*, April 2013. <https://www.researchgate.net/publication/256062468>
- Jayarathnea, T.A.N. (2014), Impact of working capital management on profitability: Evidence from listed companies in Sri Lanka. In: Reshaping Management and Economic Thinking through Integrating Eco-friendly and Ethical Practices: Proceedings of the 3rd International Conference on Management and Economics, 26-27 February, 2014. Sri Lanka: *Faculty of Management and Finance*, University of Ruhuna.
- Jensen, D., & Ramirez, D. (2008). Anomalies in the Foundations of Ridge Regression. *International Statistical Review / Revue Internationale de Statistique* Vol. 76, No. 1, 89-105.
- Katchova, A.L. and Enlow, S.J. (2013), "*Financial performance of publicly-traded agribusinesses*", *Agricultural Finance Review*, Vol. 73 No. 1, pp. 58-73.
- Keats, B.W., & Hitt, M.A. (1988). A causal model of linkages among environmental dimensions, macro organizational characteristics, and performance. *The Academy of Management Journal*, 31: 570-598.

- Khilmy, A. R., Asmadi, M. N., Zairani, Z. (2014). *Applikasi Bay 'al-dayn Dalam Prochuk-produk Pembiayaan Perdagangan Antarabangsa Islam*, Shariah Journal, Vol. 21, No. 3 (2013) 289-310
- Khoshdel, N.A.R. (2006). *The study of relationship between free cash flows and operating earnings with stock returns and growth of net market value of operating assets in TSE*. Mashhad, Islamic Azad University of Mashhad, Iran.
- Khazanah. 2013a. *Khazanah Nasional* FAQ. <http://www.khazanah.com.my/faq.htm>
- Kioko, N.P. (2013), "The relationship between firm size and financial performance of Commercial Banks in Kenya", *unpublished master's thesis*, University of Nairobi.
- Kogan, L. and Tian, M. (2012), "Firm characteristics and empirical factor models: a data-mining experiment", *International Finance Discussion Papers* No. 1070.
- Largay, J., & Stickney, C. (1980). Cash Flows, Ratio Analysis and the W.T. Grant Company Bankruptcy. *Financial Analysts Journal*, 36(4), 51-54. Retrieved from <http://www.jstor.org/stable/4478363>
- Lee, T. 'Laker Airways - *The Cash Flow Truth*', Accountancy, 115-116, 1982.
- Lee, T.A. 'Cash Flow Accounting and Corporate Financial Reporting', in *Essays in British Accounting Research*, M.Bromwich and A. Hopwood (eds.), Pitman Publishing Limited, London, Ch.3, 63-78, 1981.
- Liargovas, P. and Skandalis, K. (2008), "Factors affecting firms' financial performance: the case of Greece", *Working Papers No. 0012*, Department of Economics, University of Peloponnese.
- Lin, J.W., Li, J.F. and Yang, J.S. (2006), "The effect of audit committee performance on earnings quality", *Managerial Auditing Journal*, Vol. 21 No. 9, pp. 921-933.
- Lopez-Valeiras, E., Gomez-Conde, J. and Fernandez-Rodriguez, T. (2016), "*Firm size and financial performance: intermediate effects of indebtedness*", *Agribusiness*, Vol. 32 No. 4, pp. 454-465.
- Malaysian Accounting Standard Board (2009). Retrieved from http://www.masb.org.my/pdf.php?pdf=SOPi-1_15Sept09.pdf&file_path=pdf
- Manoori, E., Muhammad, D.J. (2012), Determinants of working capital management: Case of Singapore firms. *Research Journal of Finance and Accounting*, 3(11), 15-23.

- Mariuzzo, F., Walsh, P. and Whelan, C. (2003), "Firm size and market power in carbonated soft drinks", *Review of Industrial Organization*, Vol. 23 No. 4, pp. 283-299.
- Marsh, P. (1982), "The choice between equity and debt: an empirical study", *The Journal of Finance*, Vol. 37 No. 1, pp. 121-144.
- Maxwell, J. A. (2010). *Qualitative research design: An interactive approach* (2nd Ed.). Thousand Oaks, CA: SAGE Publications.
- McKnight, P.J. and Weir, C. (2008), "Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: a panel data analysis", *The Quarterly Review of Economics and Finance*, Vol. 49 No. 2, pp. 139-158.
- Menon, J. (2017), *Government Linked-Companies: Impact on the Malaysian Economy*, *Institute of Democracy and Economic Affairs*. Retrieved from <http://www.ideas.org.my/wp-content/uploads/2017/12/PI45-Government-Linked-comapnies-and-its-Impacts-on-the-Malaysian-Economy-V4.pdf>
- Menon, J. (2012). Malaysia's Investment Malaise: What Happened and Can It Be Fixed?, *ADB Economic Working Paper Series, No. 312*. Retrieved from <https://www.adb.org/sites/default/files/publication/29933/economics-wp-312.pdf>
- Mensah, Y. (1984). An Examination of the Stationarity of Multivariate Bankruptcy Prediction Models: A Methodological Study. *Journal of Accounting Research*, 22(1), 380-395. doi:10.2307/2490719
- Miar, S. (1995). The study of information content of cash flow financial Ratios in companies listed in TSE, *TSE Financial Review*. 69-84.
- Mills J. R. and Yamamura, J.H. "The Power of Cash Flow Ratios", *Journal of Accountancy*, Vol.186, No.4, 53- 61, 2000.
- Mong'o, G. (2010). *The relationship between cash flows and profitability of commercial banks in Kenya*, Unpublished MBA Project, University of Nairobi.
- Mutl, J. and Pfaffermayr, M. (2011). *The Hausman test in a Cliff and Ord panel model*. *Econometrics Journal* 14, 48-76
- Napompech, K. (2012), Effects of working capital management on the profitability of Thai listed firms. *International Journal of Trade, Economics and Finance*, 3(3), 227-232.
- Nwanyanwu, L.A. (2015). Cash flow and organizational performance in Nigeria: Hospitality and print media industries perspectives. *European Journal of Business, Economics and Accountancy*. Vol. 66-72

- Nurdiyana Nazaruddin, Rahimah Mohamed Yunos, Nini Suhana Mastini Razi (2017) 'Capital structure of Malaysian government linked companies during the GLC transformation program' *International Conference on Accounting Studies (ICAS)* 2017.
- Ogunbiyi, S.S. and Ihejirika, P.O. (2014), "*Interest rates and deposit money banks' profitability nexus: the Nigerian experience*", *Arabian Journal of Business and Management Review*, Vol. 3 No. 11, pp. 133-148.
- Ojode, C. A. (2014). *Effect of free cash flow on profitability of firms listed on the Nairobi Securities Exchange*. A research Project submitted for the award of Degree of Masters of Business Administration School of Business, University of Nairobi.
- Okwoli, A.A. and Kpelai, S.T. (2006), *Introduction to Managerial Finance, 1st ed.*, Tomma Press, Jos.
- Omondi, M.M. and Muturi, W. (2013), "*Factors affecting the financial performance of listed companies at the Nairobi securities exchange in Kenya*", *Research Journal of Finance and Accounting*, Vol. 4 No. 15, pp. 99-104.
- Owolabi, B.A. (2017). "Economic characteristics and financial performance of selected manufacturing companies in Nigeria", unpublished master's thesis, Department of Accounting, School of Management Sciences, Babcock University, Ogun State.
- Putrajaya Committee on GLC High Performance (2015), *GLC Transformation Programme Graduation Report*, Kuala Lumpur.
- Rajan, R.G. and Zingales, L. (1995), What do we know about capital structure? Some evidence from international data, *The Journal of Finance*, Vol. 50 No. 5, pp. 1421-1460.
- Rayburn, T. (1986) The Association of Operating Cash Flow and Accruals With Security Returns. Studies on Alternative Measures of Accounting Income, *Supplement to Journal of Accounting Research* 24, pp. 112-133.
- Reddy, D. R., and P. Kameswari. 2004. *Working capital management practices in pharma industry: A case study of 'Cipla Limited'*. *Management Accountant*, August:638-44.
- Reybern, A. (2007). Cash flow from operating activities, cash and accruals, stock returns. *Journal Of Accountancy*
- Rogayah Mohd Zain (2014). *Malaysian Development Experience: Lesson for Developing Countries*, *Institute of Economics*, National University of Malaysia, Vol. 6, No. 1, pp. 17-56

- Rosmi Abdullah (2005). *Productivity Performance of Malaysian Government Linked Companies (GLCs) in Plantation Sector, National Productivity Corporation (NPC)*, Productivity Annual Report 2005, pp. 45-83
- Saiful Azhar Rosly, (2010), *Shariah parameters reconsidered. International Journal of Islamic and Middle Eastern Finance and Management*, Vol.3 Issue 2, pp. 132-146
- Sarkaria, M. and Shergill, G.S. (2000), "Market structure and financial performance – an Indian evidence with enhanced controls", *Indian Economic Journal*, Vol. 48 No. 2, pp. 98-105.
- Sawir, A. (2005). *Analisis Kinerja Keuangan dan Perencanaan Keuangan*. Jakarta: PT Gramedia Pustaka Utama.
- Shahmoradi M. (2002). *The association between accounting earnings and stock returns in firms listed in Taiwan stock exchange*. Behesti, University of Shahid.
- Sharma, D.S. and Iselin, E. The Decision Usefulness of Reported Cash Flow Information Versus Accrual Information for Banker's Assessment of Corporate Solvency, *Western Decision Sciences Conference*, Maui, Hawaii, 2000.
- Smirlock, M. (1985), "Evidence on the (non) relationship between concentration and profitability in banking", *Journal of Money, Credit and Banking*, Vol. 17 No. 1, pp. 69-83.
- Suborna Barua, Anup Kumar Saha (2015). *Traditional Ratios vs. Cash Flow based Ratios: Which One is Better Performance Indicator?*, *Advances in Economics and Business* Vol. 3 Issue: 6, pp 232-251
- Subrahmanyam, A. and Titman, S. (2001), "Feedback from stock prices to cash flows", *Journal of Finance*, Vol. 56 No. 18, pp. 2389-2413.
- Suwarno, A. E. (2004). *Manfaat Informasi Rasio Keuangan Dalam Memprediksi Perubahan Laba (Studi Empiris terhadap Perusahaan Manufaktur Go Publik di Bursa Efek Jakarta)*, *Jurnal Akuntansi Keuangan*.
- Taffler, R., & Abassi, B. (1984). *Country Risk: A Model for Predicting Debt Servicing Problems in Developing Countries*. *Journal of the Royal Statistical Society. Series A (General)*, 147(4), 541-568. doi:10.2307/2981843
- Tarawneh, M. (2006), "A comparison of financial performance in the banking sector: some evidence from Omani commercial banks", *International Research Journal of Finance and Economics*, Vol. 3 No. 3, pp. 25-36.
- Tariverdi, Y., Amanolahi, G. F. & Faal, F. (2014). The effect of components of a 4 part model of cash flow statement on operational performance of firms enlisted in the Tehran Stock Exchange. *Indian Journal of Science Research*. Vol.7 (1), 240- 250.

- Thanh, V.H and Nguyen, M.H. (2013). The effect of banking relationship on firm performance in Vietnam. *International Journal of Economics and Finance*. Vol 5. No. 5 pp 148- 158.
- Uremadu, S. O. (2004). *The Impact of Capital Structure and Liquidity on Corporate Returns in Nigeria: Evidence from Manufacturing Firms*, International Journal of Academic Research in Accounting, Finance and Management Sciences Volume 2.
- Viscione, J.A.. (2019). Assessing financial distress. *Journal of Commercial Bank Lending*. 39-55.
- Wald, J.K. (1999). How firm characteristics affect capital structure: an international comparison”, *Journal of Financial Research*, Vol. 22 No. 2, pp. 161-187.
- Watson, J. (2005) The Association of various earnings and cash flow measures of firm performance and stock returns. *School of accounting*, University of Technology, Sydney.
- Wiedermann, W., Artner, R., & Eye, A. v. (2017). Heteroscedasticity as a Basis of Direction Dependence in Reversible Linear Regression Models. *Multivariate Behavioral Research*.
- Yilmaz, A. E., & Aktaş , S. A. (2017). Autocorrelation Corrected Standard Error for Two Sample t-test Under Serial Dependence. *Journal of Mathematics and Statistics Volume 46 (6)* , pp 1199– 1210.
- Zeitun, R., Tian, G. and Keen, S. (2007), “*Macroeconomic determinants of corporate performance and failure: evidence from an emerging market the case of Jordan*”, Corporate Ownership and Control, Vol. 5 No. 1, pp. 179-194.
- Zhou, H, Yang, S. and Zhang, M (2012). *Relationship between free cash flow and financial performance. Evidence from the Listed Real Estate Companies in China*. IPC.SIT. Vol. 36; pp. 331-335.
- Zou,S.and Stan,S.(1998). The determinants of export performance: a review of the empirical literature between 1987 and 1997, *International Marketing Review*, Vol.15 No.5,pp.333-356.
- Zulkarnain, M. S, Shamsir, M. and Mohamed E. S, (2015). *Shariah Governance Practice in Malaysian Islamic Financial Institutions*, International Center of Islamic Finance, SSRN Electronic Journal

APPENDIX A

List of Government Link Companies

GLCs	Percentage of shareholding by the Government
Employees Provident Funds	
Commerce Asset-Holding	20.00%
CIMB	14.20%
Malaysia Building Society	63.00%
Malaysia Resources Corporations	30.00%
Lembaga Tabung Haji	
BIMB Holdings	30.00%
Syarikat Takaful Malaysia Berhad	22.20%
Lembaga Tabung Angkatan Tentera	
Affin Holdings	47.20%
Boustead Holdings	70.00%
Boustead Properties	39.20%
PSC Industries	23.10%
UAC	27.30%
Johan Ceramics	60.00%
Petroliam Nasional	
Bintulu Port Holdings	33.00%
KLCC Property Holdings	51.00%
MISC	62.00%
Petronas Dagang	70.00%
Petronas Gas	61.00%
Minister of Finance Incorporated	
Bursa Malaysia	20.00%
Pos Malaysia & Services Holdings	33.30%

GLCs	Percentage of shareholding by the Government
Commerce Asset-Holdings	26.00%
CIMB	18.70%
D'nonce Technology	20.00%
Faber Group	41.00%
Malaysia Airport	73.00%
Malaysia Airlines System	69.00%
Park May	25.00%
Proton Holdings	38.00%
Plus Expressway	67.00%
Tenaga Nasional Berhad	37.00%
VADS	24.50%
Time Engineering	45.00%
Time dotCom	50.30%
Uda Holdings	50.00%
UEM World	63.00%
Cement Industries of Malaysia	34.00%
Opus International Group PLC	39.10%
Pharmaniaga	34.70%
UEM Builders	32.80%

Permodalan Nasional & Funds

BIMB Holdings	30.00%
Central Industries Corporation	39.00%
Chemical Company of Malaysia	64.00%
Formosa Prosanac Industries	26.00%
Golden Hope Plantations	57.00%
Mentakab Rubber	34.20%
Megara Properties	35.30%
Island & Peninsular	60.00%
Kumpulan Guthrie	74.00%
Guthrie Ropel	42.90%
Highlands & Lowlands	40.70%
Malayan Banking	51.00%
Malaysian Industrial Development	37.00%
MNI Holdings	75.00%
MNRB Holdings	60.00%
NCB Holdings	56.00%
Sime Darby	45.00%
Sime Engineering Services	31.50%
Tractors Malaysia Holdings	32.40%
Sime UEP Properties	51.00%
UMW Holdings	60.00%
Ya Horng Electronic (Malaysia)	30.00%

APPENDIX B

Summary of the studies in investing the cash flow as a tool in financial decision.

Authors	Sampling / Population	Variables	Finding
Beaver (1996)	Statistically analysis on 158 companies - 79 non-perform and 79 performed based on size in the industry	Cash Flow / Total Debt Cash Flow / Total Assets Cash Flow / Net Worth	Cash Flow/Total Debt best predictor with a 13% misclassification error one year prior to failure and 21%, 23%, 24% and 25% for two to five years prior.
Deakin (1972)	Multivariate dimensionality reduction technique for five years on 64 firm. Validity performance on 11 non-perform and 23 performed firm based on industry and size.	Cash Flow / Total Debt	Variable significantly for year one, two and three.
Blum (1974)	Statistically analysis test on 21 company for six years prior to failure. Sampling based on industry, size, employees and fiscal year.	Cash Flow / Total Debt	Significantly predictor for the variable.
Norton and Smith (1979)	Discriminant analysis on linear multiple stepwise for four years prior to failure. Sampling base on size and industry	Cash Flow / Sales Cash Flow / Total Assets Cash Flow / Net Worth Cash Flow / Total Debt	i. Cash Flow / Total Assets ii. Cash Flow / Total Debt Is the best formula model within three years prior to the failure

Authors	Sampling / Population	Variables	Finding
Largay and Stickney (1980)	Single case study on W.T. Grant Company. Trend analysis of cash flow operation with other accruals variables.	Cash flow from operations	Cash flow from operations more accurately indicated impending failure up to 10 years prior to WT Grant's demise. Profitability and stock prices began showing signs only as early as two years prior to failure.
Lee (1982)	Single case study on Laker Airways by comparing the profitability and operating cash flow.	Cash flow from operations	The variable is indicated three year prior to the failure but not the profitability
Mensah (1983)	Five years of 60 companies prior to failure. Validation sample composed 11 bankrupt and 35 performed companies.	Cash Flow / Total Liability Cash Flow / Total Assets Cash Flow / Sales Cash Flow / Net Worth	In historical cost model, Cash Flow / Net Worth has a significant impact and in the second rank in specific price level model
Taffler (1984)	Model Driven Architecture and adjusted model is used with 24 failed and 49 non-failed companies within one year.	Cash Flow / Total Liability	Variable is defined as second most significant predictor.
Casey and Bartczak (1984)	Five years analysis of 60 non-perform companies and 230 performed companies prior to failure. Three cash flow ratios and six accrual basis ratios used in the analysis.	Operating Cash Flow (OCF) defined as working capital from operations adjusted by non-cash working capital accounts, i. OCF / Current Liabilities ii. OCF/total liabilities.	None of the Cash flow ratios were strongly indicate the failure. However, results show that cash flow variable is better than accrual variables in identifying failures.

Authors	Sampling/ Population	Variables	Finding
Casey and Bartezak (1985)	Five years analysis on 60 non-perform companies and 230 performed companies prior to failure. Model Driven Architecture with cash flow ratios and accrual basis ratios used in the analysis.	Operating Cash Flow (OCF) defined as working capital from operations adjusted by non-cash working capital accounts, i. OCF / Current Liabilities ii. OCF/total liabilities.	Cash Flow ratios did not significantly increase the predictive ability of the accrual MDA models. On re-interpretation of their results, the cash flow variables significantly increased explanatory power and predicted probabilities of failure/non-failure of the accrual model.
Gentry et al (1985a)	Analysis on 33 bankrupt and 33 performed companies in three years.	Helfert's (1972) model and serial data using total net flow.	Cash Flow from operations is not significant prior to failure. However, dividend component was significantly in cash flow variables.
Gentry et al (1985b)	Analysis on 33 bankrupt and 33 performed companies in three years. The authors assess the ability of accrual ratios and cash variables.	Helfert's (1972) model and serial data using total net flow.	Accrual ratios were not significantly related. However, dividends, investment and cash receivables variables were reliable predictors a year prior to failure.
Viscione (1985)	Twenty four failure companies up to five years prior to failure. Comparison between cash flow from operations with selected accrual ratios.	Cash flow from operations	The variables is not showing a strong indicator for financial distress.
Gombola et al (1987)	Analysis of twenty one accruals ratios with three cash flow ratios for 77 failed and non-failed firms. Data collection for a years prior to failure.	i. Cash Flow from Operations / Assets ii. Cash Flow from Operations / Sales iii. Cash Flow from Operations / Debt	None of the cash flow ratios were significant predictors for company failure.

Authors	Sampling / Population	Variables	Finding
Gahlon and Vigeland (1988)	Five years serial data for 60 non-performed companies and 204 performed companies by comparing the cash flow profiles.	i. Cash flow from sales activity ii. Cash flow from operations iii. Cash flow after debt retirement iv. Cash Coverage ratio	All variables give an indication as earlier as five years prior to failure.
Dambolena and Shulmen (1988)	Recomputed Altman's model 1968 and Gentry et al 1985b model for 25 bankrupt companies matched with 25 performed companies.	Net liquid balance which equals operating cash flows less increases in cash investments plus increases in long term financial flows.	Net liquid balance improved the predictive accuracy of both models especially for non-bankrupt firms. Improvement in predictive accuracy was greater for the Gentry <i>et al</i> model than for Altman's model.
Aziz <i>et al</i> (1988)	49 failure firms matched with 45 successful firms. The authors investigated on cash flow potential extract from Lawson's model.	Extract from Lawson cash flow identity model.	Cash tax paid was the most consistent variable with operating cash flow ranking as the second most significant predictor.
Aziz and Lawson (1989)	49 failure firms matched with 45 successful firms for five years prior to failure. The authors investigated on Altman's Z, Zeta models and a mixed model comprising cash and accrual variables.	Extract from Lawson cash flow identity model.	The cash flow model was more accurate in predicting bankruptcies. Operating cash flow and debt cash flow were the two most significant cash variables.

Authors	Sampling / Population	Variables	Finding
Gilbert <i>et al</i> (1990)	Used two type of models base on 52 bankrupt and 208 non-bankrupt firms. Fourteen ratios used consist of three cash flow ratios.	i. cash flow from operations/current liabilities (CFFO/CL) ii. cash flow from operations/total liabilities (CFFO/TL) iii. cash flow from operations/total assets.	CFFO/TL significant in classifying bankrupts and non-bankrupts and CFFO/CL significant in classifying bankrupt and distressed. The finding reveal that cash flow ratios add significantly to prediction accuracy of accrual models.



UUM
Universiti Utara Malaysia